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REMARKS

Claims 1-9 are pending in the application. All claims stand rejected.

As an initial matter, Applicants submit herewith a Terminal Disclaimer disclaiming that portion of the term of the present application beyond the terms of co-pending application serial numbers 10/707,365 and 10/707,366 to overcome the provisional obviousness type double-patenting rejection set forth in paragraph 3 of the Office Action.

With regard to the claim objections set forth in paragraph 4 of the Office Action, Applicants believe that the objections set forth therein are directed towards co-pending application serial number 10/707,365, and not the present application. Accordingly, the claim objections set forth in paragraph 4 should be withdrawn.

With regard to the claim objections set forth in paragraph 5 of the Office Action, claims 2, 5, and 8 have been amended as suggested therein to note that the curvature of the intended path recited therein refers to the previously mentioned curvature set forth in the claims.

Claim Rejections Under 35 U.S.C. §112

Claims 7-9 stand rejected under 35 U.S.C. §112, first paragraph, for lack of enablement arising out of Applicants' use of the phrase "previously determined steering wheel angle". By the foregoing amendments, Applicants have corrected this ambiguity by reciting an initial steering wheel angle which is thereafter updated as a revised steering wheel angle when the vehicle is not on target. This amendment is supported by the specification as originally filed at paragraph [0029] where it describes a previous or initial steering wheel angle from a previous loop through the method. This initial steering wheel angle is maintained unless certain conditions are satisfied which require a revised steering wheel angle as described in the specification. A similar amendment has been made to claim 1. Accordingly, the claim rejections set forth in paragraphs 7 and 9 of the Office Action regarding claims 7-9 and claims 1 and 2 should be withdrawn.

With regard to the rejections under 35 U.S.C. §112, second paragraph, of claims 3, 6 and 9, because of Applicants' use of the phrase "a maximum scale factor", Applicants traverse. Applicants maintain that one of ordinary skill in the art would

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readily understand what Applicants intend to protect in claims 3, 6 and 9. Paragraph [0034] of the specification clearly sets forth that in the example recited therein, the scale factor is normally 1.0 which represents a maximum scale factor. However, during certain driving conditions, the scale factor is reduced from the maximum value of 1.0 to more accurately represent the look-ahead reference point adjustment which is mentally performed by most vehicle operators experiencing similar roadway conditions. Thus, as set forth in claims 3, 6 and 9, the maximum look-ahead scale factor of 1.0 is reduced to about 62% thereof during straight-line vehicle travel. Accordingly, Applicants submit that the claimed predetermined maximum scale factor is clearly set forth in the claim language as well as the specification and would be readily understood by one of ordinary skill in the art. For this reason, the rejections set forth in paragraph 9 of the Office Action should also be withdrawn.

Claim Rejections Under 35 U.S.C. §101

The rejections set forth in paragraph 10 of the Office Action refers to claims 10-18 which do not exist in the present application. Again, Applicants believe that this rejection was intended to apply to co-pending application serial no. 10/707,366.

Claim Rejections Under 35 U.S.C. §102 and §103

Claims 1, 2, 4, 5, 7 and 8 stand rejected under 35 U.S.C. §102 in view of Sharp. Claims 3, 6 and 9 stand rejected under 35 U.S.C. §103 as obvious in view of the Sharp reference. Applicants traverse these rejections and submit that the present claims are allowable over Sharp because the present claims and the prior art differ. Specifically, each of independent claims 1, 4 and 7 require the step of determining a look-ahead scale factor as a function of the intended path curvature which the Sharp reference does not teach or suggest. Further, the path information recited in each of the claims comprises a road radius of curvature which the Sharp reference does not disclose or suggest. Rather, the Sharp reference refers in all instances to a road angle which corresponds to the longitudinal axis of the vehicle as compared to a straight-line "fixed x-direction".

The Sharp reference concerns an optimized model for three different steering control situations. A careful reading of the Sharp reference reveals that the "preview time" disclosed therein does not vary as a function of the intended path curvature as

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claimed in the present application. Rather, the preview time discussed in Sharp differs based upon the priority of the following variables: attitude angle control, path tracking, and steering input. Depending upon how these variables are prioritized, the preview time will vary. Critically, however, the preview time does not vary within any given priority model for any variable other than vehicle speed. Thus, as explained in Sharp, when path following precision is given the highest priority (referred to as system (a) in Sharp), about one second of preview time is all that is needed at low speeds and about 1.5 seconds is sufficient at high speeds (page 10, second full paragraph). However, when priority is placed on attitude angle control, shortened preview times are permissible (system (b) in Sharp). Finally, when steering input is of greatest concern, much longer preview times, i.e., on the order of 8 seconds, are necessary. Importantly, no portion of the Sharp disclosure teaches or suggests varying the preview time based upon the road radius of curvature as set forth in each of independent claims 1, 4 and 7 of the present application. Accordingly, for this reason, the rejections under 35 U.S.C. §102 and §103 should be withdrawn.

Conclusion

Having overcome all of the objections and rejections set forth in the Office Action, Applicants submit that claims 1-9 are in a condition for allowance. A Notice of Allowance indicating the same is therefore earnestly solicited. The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 223-9500 if any unresolved matters remain.

Respectfully Submitted,

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